

REMARKS

Claims 1 and 3-21, and 45-66 are pending in this application. Claims 2 was previously canceled. Claims 22-44 are canceled. Claims 1-21 were rejected under 35 USC 102. Claims 1, 4, 12-19, 5 and 21 are amended herein. New Claims 45-66 are added.

No new matter has been added. The new or amended claims are supported in the specification through express, inherent, or implicit disclosure. MPEP 2163 I.B.

Claim Amendments

10 The claims have been amended herein to obviate the Examiner's rejections. Independent Claim 1 has been amended to now claim that the solder matrix is comprised of a solder alloy forming a solder **preform**. Independent Claim 19 now claims a solder matrix forms a solder **preform** and comprises a solid solder alloy. This is not disclosed in the cited art. Keyser et al. discloses a solder paste, not a solder **preform**. A solder preform has a predetermined shape prior to placement or application. Paste does not.

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Further, Claims 1 and 19 now claim that the microparticles are **embedded in solder alloy**. The cited art does not disclose 20 microparticles embedded in solder alloy. Instead Keyser et al shows spacer particles and solder spheres bound with a flux material. In Keyser et al, the spacer particles are not embedded in the solder particles. In addition, Claim 19 now further claims the micropheres **embedded within a solid** solder alloy. This is not 25 the same as spacer spheres along side solder spheres.

Claims 1 and 19 now more particularly claim the solder matrix, which is different from the "known flux matrix" taught by Keyser et al. Claims 1 and 19, now claim a solder matrix which comprises 30 microparticles embedded in the solder alloy. This is not the same as the spacer spheres along side solder spheres "suspended in a

matrix of flux material."

Applicants also hereby incorporate by reference their prior Responses and respectfully maintain that the Examiner **must** give the words of the claims their plain meaning in light of the specification as is customary to one skilled in the art. Thus, the scope of claims in patent applications are determined not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, (Fed. Cir. 2004); MPEP 2111. "The broadest reasonable interpretation of the claims **must** also be consistent with the interpretation that those skilled in the art would reach." *In re Cortright*, 165 F.3d 1353; MPEP 2111.01 (emphasis added). The plain meaning of the term "solder matrix" in the context of the pertinent art is evidenced in Keyser et al. The claimed configuration is not spacer spheres along side solder spheres "suspended in a matrix of flux material" as shown and described in Keyser et al. In the solder paste of Keyser, the solder balls do not bind the spacer spheres, the flux does. As now claimed, amended Claim 1 claims a solder matrix comprised of a solder alloy with embedded microparticles forming the solder preform. Amended Claim 19 now claims the solder matrix forming the solder preform and comprising a solid solder alloy with embedded microspheres. To one skilled in the pertinent art, in light of the present specification, this is not the same as the "matrix of flux material" described and illustrated in Keyser et al.

Claims 4, 12-18, and 21 have been amended to provide proper antecedent basis in view of the amendments to their respective independent claims and were not amended for the purposes of patentability.

Thus, Claims 1, 3-21 as amended herein are not anticipated under 35 USC 102 because all the claimed limitations are not taught

by Keyser et al.

New Claims 45-64

5 New Independent Claims 45 and 62 claim a non-paste solder matrix forming a solder preform having microparticles constructed to be capable of arranging to provide uniform separation. This is not disclosed by the cited art. In addition, dependent Claims 55 and 66 further limit their respective dependent/independent claims, and claim a solder preform which comprises microparticles
10 comprising at least one of polyhedrons or crystalline particles. This is not disclosed in the cited art.

Therefore, in accordance with the above rationales and amendments Claims 1, 3-21, and 45-64 are in condition for immediate allowance.

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Respectfully submitted,

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